*Discussion of the art rejections:*

The invention

The invention relates to a method for use in a system in which information is transmitted. In the prior art, when transmitting MPEG 4-type data, a COD field is transmitted. The COD field has one bit which indicates whether or not a motion vector and a DCT are encoded in the bit stream. That is, if the COD field is "0", the information is not motion vector and DCT encoded. Because the COD field is represented by only one bit, if this bit has an error, the information is easily misinterpreted. Additionally, there is no way to tell if the information is encoded using only a motion vector or is encoded using only DCT. For example, if an image is in motion on a predetermined background, then only the motion vector is needed for encoding.

The present invention improves on the prior art by providing a field code having at least two bits. Preferably, when the COD field has a bit value of "11", it indicates that neither the motion vector nor the DCT value are encoded; when the COD field has a bit value of "00", it indicates that both the motion vector and the DCT are encoded; and when the COD field has a bit value of "01", it indicates that only the MV is encoded.

Preferably, when an error exists in a channel, only the two values of "00" and "11" are used in an error allowable mode.

The rejection of claims 8-11 and 14

In rejecting claims 8-11 and 14 as being anticipated by Suzuki et al, the Examiner states that:

> Suzuki et al disclose a method for use in a system comprising the steps of: generating an extended code (COD) field representing a coding state of the information (Fig. 40A. COD); and including, in the extended code field, a bit stream indicating whether both a motion vector and a DCT value being not encoded (Col. 33, lines 54-60), whether both the motion vector and the DCT are encoded (Col. 35, lines 1-8), or whether

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only the motion vector is encoded (Col. 34, lines 31-40 and Col. 35, lines 1-3) as specified in claim 8.

Applicants submit, however, that Suzuki et al discloses a one bit COD field for use with an I- or P-picture, which when set to "0" signals that the macro-block is coded, and if set to "1" indicates that no further information is transmitted for this macro-block. In the latter case, the decoder treats the macro-block as an INTER macro-block with motion vector for the whole block equal to zero and with no coefficient data. Suzuki et al also discloses an MODB flag for use with B-pictures, wherein the MODB flag can indicate: 1) whether the macro-block of the B-picture is skipped (i.e., no data subsequent to the MODB is transmitted for the macro-block); 2) whether a motion vector are transmitted; and 3) whether DCT coefficients and a motion vector are transmitted. In rejecting the claims, the Examiner has mixed the functions of the COD and the MODB as though these functions were included in a single flag.

In more detail, the Examiner seems to be correct that Suzuki et al, in Fig. 40 A, discloses generating an extended code (COD) field representing a coding state of the information, and discloses, at col. 33, lines 54-60, including, in the extended code field, a bit stream indicating whether both a motion vector and a DCT value are not encoded. Specifically, Suzuki et al, at col. 33, lines 51+, discloses:

> FIG. 40A [reproduced below] shows the syntax of a macro-block of an I- or P-picture. The flag COD, which is arranged next to the leading first __MMR__ code, specifies whether or not any data is next to the COD. If the DCT coefficients obtained from a macro-block of an I-picture or a P-picture (result of quantization of the DCT coefficients) are all zero and the motion vector is zero, the VLC unit 36 of the lower layer encoding unit 25 (FIG. 22) and the upper layer encoding unit 23 (FIG. 23) sets the macro-block of the I-picture or the P-picture as a skip macro-block and sets the COD to 1. Therefore, if the COD is 1, there is no data to be transmitted for the macro-block, so that data subsequent to the I-flag is not transmitted. On the other hand, if ac components other than 0 are present in the DCT coefficients of the I- or P-picture, the VLC unit 36 sets the flag COD to 0 and may transmit subsequent data.

| first_MMR_code | | | | | | | |
|---|---|---|---|---|---|---|---|
| COD | MCBPC | CBPY | DQUANT | MVD | MVD₂ | MVD₃ | MVD₄ |
| CR | a0_color | VLC_binary | PLB/ULB | CODA | CBPA | Alpha.Block Data | Block Data |

Structure of macroblock layer in I-and P-VOPs

**FIG.40A**

| first_MMR_code | | | | | | | |
|---|---|---|---|---|---|---|---|
| MODB | MBTYPE | CBPB | DQUANT | MVD₁ | MVDb | MVDB | CR |
| a0_color | VLC_binary | PLB/ULBN | COD | MODBA | CBPBA | A.Block Data | Block Data |

Structure of macroblock layer in B VOPs

**FIG.40B**

This arrangement is similar to the prior art arrangement described in the present application.

However, Applicants respectfully submit that Suzuki et al does not disclose that the COD indicates whether both the motion vector and the DCT are encoded (at col. 35, lines 1-8 as indicated by the Examiner, or anywhere else in the patent), or whether only the motion vector is encoded (at col. 34, lines 31-40 and col. 35, lines 1-3 as indicated by the Examiner, or anywhere else in the patent). The portions of the reference cited by the Examiner as teaching these features relate to the MODB flag of a B-picture macro-block, which is separate from the COD field of the I-picture or P-picture.

In more detail, Suzuki et al, at col. 34, lines 25 to 30, states:

> FIG. 40B [reproduced above] shows the syntax of a macro-block of a B-picture (VOP). The flag MODB, arranged next to the leading first__MMR__code, is associated with the flag COD in FIG. 40A, and specifies whether or not any data is arranged next to the MODB (that is, specifies the macro-block type of the B-picture).

Further, Suzuki et al, at col. 34, line 66 to col. 35, line 8, states:

> If, however, the DCT coefficients (quantized DCT coefficients) for a macro-block [of a B-picture] all have the same value (such as 0) but a motion vector for the macro-block exists, so that is the motion vector should be transmitted, the MODB is set to `10` and the next following MBTYPE is transmitted. On the other hand, if at least one of the DCT

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coefficients of the macro-block is not zero (that is, if a DCT coefficient exists) and a motion vector for the macro-block exists, the MODB is set to `11` and the next following MBTYPE and CBPB are transmitted.

The terms COD and MODB have art-recognized meanings which are consistent with the description in Suzuki et al and consistent with the arguments presented above. Thus, Applicants respectfully submit that the Examiner has improperly attributed the features of the MODB (which relates to the B-picture macro-block) to the COD (which relates to the I-picture macro-block) in a manner which is not consistent with the recognized meaning of these terms of art.

At least for the above reasons, Applicants submit that Suzuki et al does not teach generating an extended field code (COD) which includes a bit stream indicating whether both a motion vector (MV) and a discrete cosine transform (DCT) value are not encoded, whether both the MV and the DCT are encoded, or whether only the MV is encoded.

Furthermore, even though the rejection is an anticipation rejection, Applicants submit that claim 8 is not obvious over Suzuki et al. For example, Applicants believe that it would not have been obvious to incorporate the features of the COD and the MODB into one field, because the COD and the MODB operate in conjunction with one another. For example, at col. 34, lines 53-65, it is stated:

> If, with the use of the MODB table A, a macro-block of a B-picture can be decoded using only data (such as quantization coefficients or a motion vector) of a macro-block of another frame decoded before decoding the macro-block of the B-picture, or a macro-block at a corresponding position of a directly previously decoded I- or P-picture (that is, a macro-block of an I- or P-picture at the same position as the macro-block being processed) is a skip macro-block with the COD being zero, the VLC unit 36 (FIGS. 22 and 23) sets the macro-block of the B-picture as the skip macro-block with the MODB being zero. In this case, data subsequent to MODB, such as MBTYPE and CBPB, may not be transmitted.

With respect to claims 9-11 and 14, Applicants believe that these claims distinguish over Suzuki et al at least by virtue of their dependence from claim 8.

REQUEST FOR RECONSIDERATION
U.S. Appln. No. 09/203,672

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited.  If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain

the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to

be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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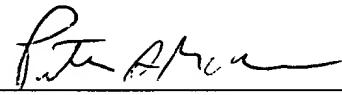
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